

## **MONTREAL, Senior Full Stack Engineer, full-time, in-person**

Puzzle Medical Devices® Inc. is developing a percutaneous heart pump for patients with advanced heart failure. The device's modular design allows for safe percutaneous implantation to support both renal and cardiac function through 4mm-pumps anchored in parallel in the descending aorta, allowing stability for patient mobility. To date, Puzzle Medical Devices® Inc. has successfully: completed a Series A financing round (2023); completed its first-in-human study with all patients experiencing improvements in cardiac and kidney function (2022); received U.S. Food and Drug Administration (FDA) Breakthrough Device Designation (2021).

### **POSITION SUMMARY**

Puzzle Medical Devices® Inc. is seeking a highly skilled Senior Full Stack Engineer to join our expanding engineering team. You will work on designing and implementing secure, scalable backend infrastructure, real-time data pipelines, and visualization tools that support our cutting-edge heart pump system. As part of a cross-functional group, you will collaborate with colleagues in firmware, hardware, and QA to deliver robust solutions that directly impact patient care.

### **ROLE AND RESPONSIBILITIES**

#### **IoT Connectivity**

- Develop and maintain backend services (Python, Node.js, Go, or similar) that handle real-time data ingestion from heart pump controllers
- Implement IoT protocols (MQTT, REST API, or similar) for reliable data streaming

#### **Data Handling & Visualization**

- Integrate time-series databases (for example, TimescaleDB or InfluxDB) or other database solutions to store and manage high-frequency medical device data
- Contribute to front-end interfaces (React, Vue, Angular) for deeper data visualization

#### **System Scalability, Security & Reliability**

- Architect solutions to ensure high availability and low latency, minimizing downtime and data loss
- Enforce secure data transmission practices (encryption, authentication) in compliance with healthcare regulations such as HIPAA
- Implement redundancy, failover strategies, and backup processes to protect data integrity

### **EXPERIENCE AND EDUCATION**

- 5+ years of professional software engineering experience, focused on backend and/or IoT development
- Proven experience as a mid-to-senior level engineer in designing, developing, and delivering medium-sized full-stack applications end-to-end
- Bachelor's or Master's degree in Computer Science, Software Engineering, or a related field

### **TECHNICAL SKILLS**

- Proficiency in backend development (Python, Node.js, Go, or similar)
- Experience with cloud technologies and deployment (AWS/Google Cloud, Firebase, Docker)
- Experience with IoT protocols and platforms
- Experience with version control tools (Git)
- Familiarity with frontend development (React, Typescript, or similar)
- Familiarity with time-series databases and visualization tools

## SOFT SKILLS

- Excellent problem-solving skills and attention to detail, with a focus on delivering high-quality, robust solutions.
- Familiarity with regulated environments or medical devices is a plus.
- Strong communication skills in French and English.

Note: This job description is intended to provide a general overview of the position. It is not an exhaustive list of responsibilities, qualifications, or requirements. The employer reserves the right to modify the duties or requirements of the position as needed.